ARCONIC

The Huck® Product Range

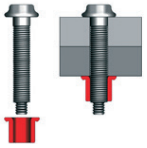
HUCK®

Huck LockBolts

Key Benefits:

- Permanent, mechanically locked fastener
  - Installation process automatically provides fastener values
  - No torque or re-torque required
- Unlike conventional nuts and bolts, they will not work loose, even during extreme vibration
- Rapid installation with quick and easy visual inspection
- Excellent gap closure capability
- Can be installed onto angled surfaces (5° maximium)
- Tamperproof

BobTail®

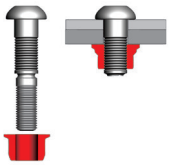


Diameters (mm)

6.4 7.9 9.5 12
12.7 14 15.9 16
19.1 20 22.2 24
25.4 27 30 36

Unique helical lock groove (upwards from 9.5mm): Holds pins and collar in place prior to installation*
No pin-tail: Reduced wastage, low installation noise
No pin-break: High corrosion resistance
Semi-automatic tooling installation: Minimises installation time
Pin head style: Brazier, truss, countersunk
Collar style: Flanged
Materials: Steel (5.8/8.8 up to 9.5mm, 8.8/10.9 12mm and above)
Coating: High corrosion resistant coatings available

C50L®

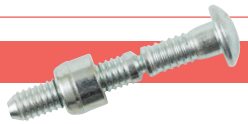


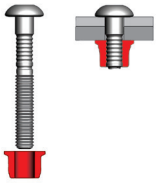
Diameters (mm)

12.7 15.9 19.1 22.2
25.4 28.6 31.8 34.9

8.8 grade large diameter Lockbolt
Made to British Standard B7805: Part 2: 1997: A mark of quality, safety and performance
High tensile friction grip fastener
Pin head style: Round, truss, countersunk, thread head
Collar style: Standard, flanged, low profile
Materials: Steel, stainless steel, aluminium
Thread head variety available for rail track applications

C6L® - The Original Huck Design



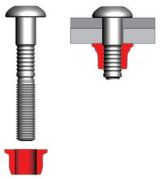


Diameters (mm)

4.8 6.4 7.9 9.5

5.8 grade small diameter Lockbolt
Made to British Standard B7805: Part 1: 1997: A mark of quality, safety and performance
Wide flange collar available: Enables installation into non- metallic materials
Pin head style: Brazier, truss, countersunk, specific headstyle for palisade fencing
Collar style: Standard, flanged, wide flanged and low profile
Materials: Steel, stainless steel, aluminium

C120L®

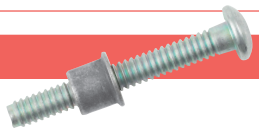


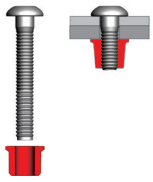
Diameters (mm)

4.8 6.4 7.9 9.5

8.8 grade small diameter Lockbolt
High tensile strength version of C6L
Pin head style: Brazier, truss, countersunk
Collar style: Standard, flanged
Materials: Steel

Magna-Grip®



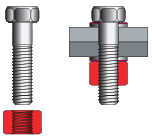


Diameters (mm)

4.8 6.4 7.9 9.5

Huge grip range: Accommodates wide variations in joint thickness - 14.3/23.9mm **
One pin and one collar cover a wide variety of applications: Reducing the risk of incorrect fastener installation
Wide grip range minimises fastener inventory
Flush pinbreak: No catching on clothes, skin or goods
Pin head style: Button, truss, countersunk, rivet, broad truss
Collar style: Standard flange, medium flange, wide flange
Materials: Steel, aluminium

Huck 360® - Unique Lockbolt Solution



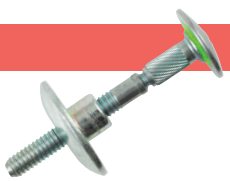
Diameters (mm)

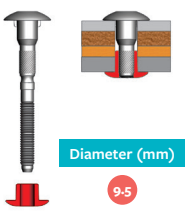
M10 M12 M16 M18
M20 M27 M36

Imperial sizes available on request

No special tooling system required: Can be installed using a standard torque wrench
Ideal for use where installation accessibility is limited for a standard Lockbolt
Can be removed and re-tightened***
High speed installation: No prevailing torque
All the performance benefits of a 10.9 grade Lockbolt

Hucktainer® - Designed specifically for joining composite board in trailer applications.





Diameter (mm)

9.5

Will not crush or damage the composite board
Integral seal around pin head prevents moisture ingress
Low profile on both sides when installed: No catching on clothes, skin or goods. Not as grip sensitive as some competitor products

Pin head style: Standard low profile, encapsulated in plastic
Sleeve style: Wide bearing, medium bearing, clearance
Short grip version available
Materials: Steel

* Special tab collar is needed to perform this function. ** Based on 6.4mm diameter. Two different grip lengths available. *** As long as the nut and bolt set remain free spinning after removal.

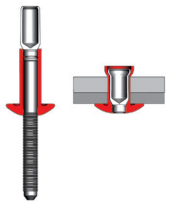
Individual fastener benefits will vary depending on the application they are used in. Please discuss with your AFS Customer Manager prior to fastener choice.

Huck Structural Blind Fasteners

Key Benefits:

- Internal locking mechanism retains the pin
  - Structural fastener after installation
  - Higher strength than a standard open end blind fastener
- Ideal for use where access is limited on one side of the application
- Preassembled fastener - Insert one part in the hole and install
- A variety of installation tooling options available

Magna-Lok®



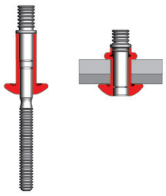
except 4.8mm

Diameters (mm)

4.8 6.4 9.5 12.7

Wide grip range: Accommodates large variations in joint thickness
Structural fastener: High shear & tensile strength
Excellent gap closure capability
Outstanding hole filling on the blind side: Excellent joint tightness and very resistant to water ingress
Flush pinbreak: No catching on clothes, skin or goods. Quick and easy visual inspection
Internal pin locking mechanism: Secure within the rivet body and protected from corrosion
Headstyles: Protruding, truss, countersunk
Materials: Steel, stainless steel, aluminium

Magna-Bulb®

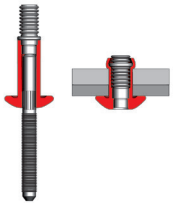


Diameters (mm)

4.8 6.4 7.9

Extra large blind side footprint: Ideal for lower strength or thin sheet joint materials
Structural fastener: Very high shear strength and high tensile strength
Flush pinbreak: No catching on clothes, skin or goods. Quick and easy visual inspection
Internal pin locking mechanism: Secure within the rivet body and protected from corrosion
Headstyles: Protruding
Materials: Steel

HuckLok™

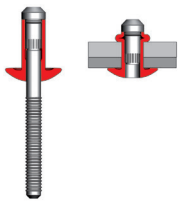


Diameters (mm)

4.8 6.4

Wide grip range: Accommodates large variations in joint thickness
Structural fastener: High shear & tensile strength
Large blind side footprint: Ideal for lower strength or thin sheet joint materials
Flush pinbreak: No catching on clothes, skin or goods. Quick and easy visual inspection
Internal pin locking mechanism: Secure within the rivet body and protected from corrosion, plus additional blind side pin locking for increased fatigue life
Headstyles: Protruding
Materials: Steel

Auto-Bulb™

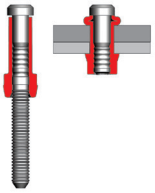


Diameters (mm)

6.4

Purpose design blind side shape for easy hole location: Ideal for automated assembly
Large blind side footprint: Ideal for lower strength or thin sheet joint materials
Good blind side clearance: Less space required on the blind side prior to installation
High pin retention: Prevents possibility of noise or vibration in dynamic assemblies
Recessed pinbreak: No catching on clothes, skin or goods
Headstyles: Protruding, Oval Countersunk
Materials: Steel, Stainless Steel

BOM®

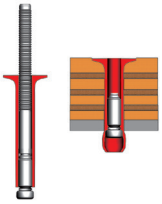


Diameters (mm)

4.8 6.4 7.9 9.5 12.7 15.9 19.1

Very high strength/diameter ratio: Can be used in demanding structural applications as an alternative to threaded fasteners or welding
Very high joint tightness when compared to conventional blind fasteners
Very resistant to tampering, extremely hard to remove
Excellent gap closure capability
Large blind side footprint: Ideal for lower strength or thin sheet joint materials
Headstyles: Protruding
Materials: Steel

FloorTight® - The flooring specialist fastener

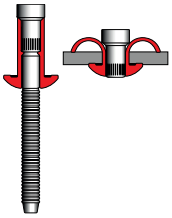


Diameters (mm)

7.9

Self countersinking head: Ideal for use on timber flooring and phenolic faced plywood
Superior strength to conventional flooring screws: Reduces the number of fasteners required and number of drilled holes
3 Clamp strengths available to suit your joint. No crushing or pulling through the board
Recessed pinbreak: No catching on clothes, skin or goods
Headstyles: Standard flange and wide flange
Materials: Steel

Penta-Lok™ - Specifically Designed for the Composite Panel Market

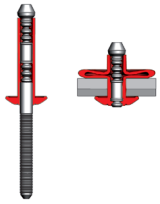


Diameters (mm)

6.4

Specifically for joining load restrain profiles to lightweight panel
Penta-Lok "claws" unfurl and install inside the actual panel not on the blind side/back of panel
High pull out strength: Due the load spread of the "claws" inside the lightweight panel of approximately 16mm.
No through hole required in the lightweight panel: Penta-Lok only needs a minimum 8mm of depth in the lightweight panel to insert the blind side of the fastener
Headstyles: Protruding
Materials: Steel

Magna-Tite™ - The roofing specialist fastener



Diameters (mm)

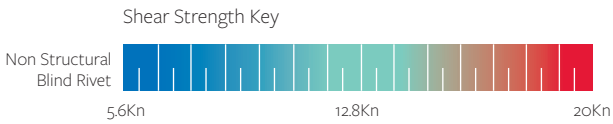
4.8 6.4

Polymer watertight seal: Ideal for roofing or similar applications
Extra large blind side footprint: Ideal for lower strength or thin sheet joint materials
Low clamp load: Perfect for use in thin sheet material, composites and plastics
Flush pinbreak: No catching on clothes, skin or goods. Quick and easy visual inspection
Headstyles: Protruding, Low Profile, Shaveable, 100° Oval
Materials: Aluminium

Individual fastener benefits will vary depending on the application they are used in. Please discuss with your AFS Customer Manager prior to fastener choice.

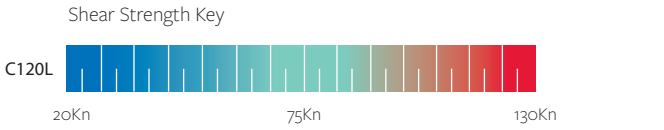
4.8 to 9.5mm Diameter Lockbolts	Material Grade	Based on Diameter: 6.4mm Material: Steel — Shear Strength	Tensile Strength	Clamp Strength	Steel
C6L	5.8				•
C120L	8.8				•
Magna-Grip					•
BobTail	5.8/8.8				•

Key for 4.8 to 9.5mm Diameter



12 to 36mm Diameter Lockbolts	Material Grade	Based on Diameter: 16mm Material: Steel only — Shear Strength	Tensile Strength	Clamp Strength	Material — Steel	Stainless Steel	Aluminiu
C50L	8.8				•	•	•
BobTail	8.8/10.9				•		

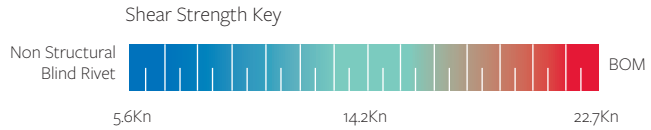
Key for 12 to 34.9mm Diameter



Structural Blind Fasteners	Based on Diameter: 6.4mm Material: Steel — Shear Strength	Tensile Strength	Material — Steel	Stainless Steel	Aluminium	4.8	6.4	7.9
Magna-Lok			•	•	•	•	•	
HuckLok			•			•	•	
Magna-Bulb			•			•	•	•
Auto-Bulb			•	•			•	
BOM			•			•	•	•
FloorTight	*	*	•					•
Magna-Tite	**	**			•	•	•	
Penta-Lok			•				•	

Key for 4.8 to 19.1mm Diameter

* only available in 7.9mm diameter. ** only available in aluminium.



Material		Diameter (mm)								
Stainless Steel	Aluminium	4.8	6.4	7.9	9.5					
•	•	•	•	•	•		•			
		•	•	•	•		•			
	•	•	•	•	•	•	•	•		
•			•	•	•		•		•	•

rength Key

5Kn 10Kn

Diameter (mm)																
m	12.0	12.7	14.0	15.9	16.0	19.1	20.0	22.2	24.0	25.4	27.0	30.0	36.0				
		•		•		•		•		•				•			
	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•

trength Key

63Kn 116Kn

Diameter (mm)													
9.5	12.7	15.9	19.1										
•	•			•	•	•	•						
				•	• Double		•	•					
					•		•	•	•				
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•	•	•	•		•	•		•					
				•	•		•		•				
				•			•	•		•			
							•						

Icon Key

- Excellent Gap Closure
- Flush Pinbreak
- Pintail-less
- Includes Watertight Polymer
- Large Blindside Footprint
- Hole Seeking Tip
- Wide Grip Range
- Can be removed with a conventional tool
- Fit up Function
- Internal Pin Lock
- Flooring Fastener

How It Works

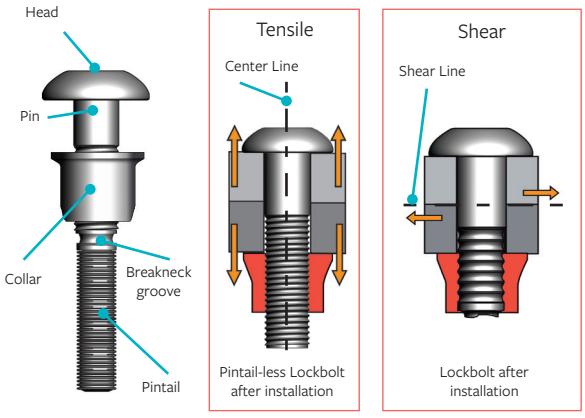
Huck Lockbolts

Clamp Force or Pre–Load: In the initial stages of the installation process, the tool engages and pulls on the pintail. The joint is pulled together before the conical shaped cavity of the nose assembly is forced down the collar. This progressively locks (swages) it into the grooves of the harder pin. The pin and swaged collar combine to form the installed fastener.

The squeezing action reduces the diameter of the collar, increasing its length. This in turn stretches the pin, generating a clamp force over the joint.

Shear strength of Lockbolts vary according to the material strength and minimal diameter of the fastener. By increasing the diameter or the grade of material, the shear strength of the fastener can be increased.

The tensile strength of Lockbolts is dependent on the shear resistance of the collar material and the number of grooves it fills.



Huck Structural Blind Fasteners

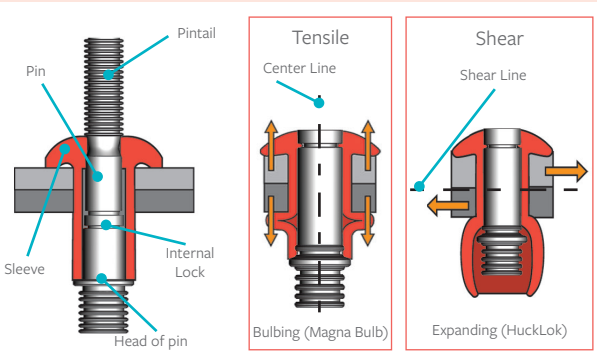
The **shear strength of structural blind fasteners** is generated by the combined resistance against failure of the pin and sleeve. This takes place along the joint's shear line between fastened plates.

The **tensile strength of structural blind fasteners** differs to that of Lockbolts, as they form a blind side positive lock either by bulbing or expanding of the sleeve. The sleeve, assisted by the permanently secured pin, therefore resists failure along its centre line.

1. Bulbing – the sleeve of the fastener is compressed, causing it to fold outwards to form a bulb. This forms itself tightly against the joint material. Once the pin is permanently locked into place the pintail will break off, completing the installation.

2. Expanding – pulling on the pintail causes the head of the pin to draw into the sleeve. This expansion causes a foot print to form against the joint material.

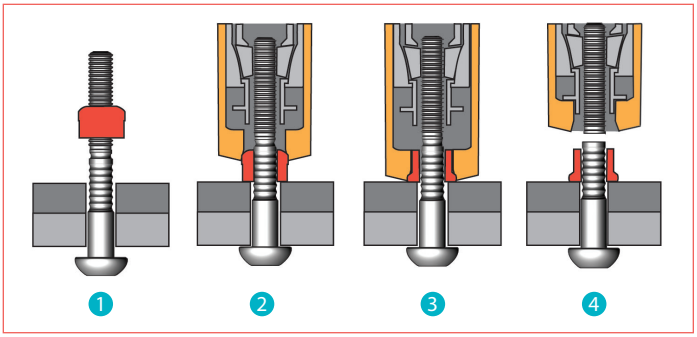
Note: The pre-load of blind rivets is generally not published, as it varies widely depending on the application



Installation Sequence

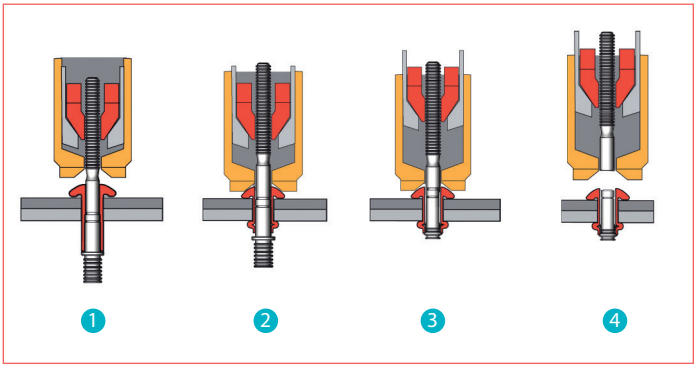
Lockbolt installation sequence

1. • Pin placed into prepared hole
   • Collar placed over pin
2. • Tool is placed over the fastener pintail and activated
   • Pin head pulled against material
   • Anvil pushes collar against joint
   • Initial clamp generated
3. • Tool swages collar, increasing clamp
4. • Pintail breaks, installation complete



Blind Fastener installation sequence

1. • Pin placed into prepared hole
   • Tool is placed over the fastener pintail
2. • Tool activated
   • Deforming of blind side begins
3. • Joint tightened
   • Internal locking mechanism formed
4. • Pintail breaks, installation complete



Huck Tooling Systems

Many different types of Huck installation tooling systems are available. Some of the most popular tools are shown below, but this is just a small part of our range. Discuss your requirements with our dedicated Systems Engineering Team to find the optimum solution to suit your need.

The basic tooling requirements to install Huck fasteners:

- **Installation Tool –** Either pneudraulic or hydraulic
- **Nose Assembly –** To match with the fastener and tool
- **Powerig® –** To supply power to hydraulic tools
- **Additional Hose Set –** Sometimes required to connect hydraulic tools to the Powerig

Huck Range Force™ Battery Installation Tool

Battery powered installation tool with electronically adjustable pull force control. Installs structural blind rivets and LockBolts up to 6.4mm.

3585

Hydraulic installation tool. Installs 12, 14, 15.9, & 19.1mm diameter Lockbolts and 15.9 & 19.1 mm BOM® structural blind rivets.

202V / 2025LB

Pneudraulic installation tool with vacuum pintail collection bottle. Installs 4.8 & 6.4mm structural blind rivets and small diameter LockBolts (2025LB only)

HuckForce Powerig™ Range

3 phase electric power rig options, suitable for use with all Huck installation tools.

2583

Hydraulic installation with extra long stroke. Ideal for installing 9.5mm Magna-Lok® and 7.9 mm Floortight®.

Will also install 7.9 and 9.5mm Lockbolts & structural blind rivets.

Swageforward® Range

Picture shown is for illustration purposes only, other tools are available in Swageforward range

Diameters: 9, 5 - 12 12, 7 - 14 - 15,9 - 16 19,1 - 20 - 22,2 - 25.4 - 27 - 30 - 36

Hydraulic tooling. Ideal for use when application space is limited. Installs 9.5mm and 12 - 25.4mm BobTail LockBolts.

2480L

Hydraulic compact installation tool; high speed & high durability. Ideal for high volume production to install 4.8 & 6.4 mm small diameter LockBolts and structural blind rivets.

The **Unshakeable World** of Huck Fastening Systems

For more than 60 years, the business Lou Huck founded and the fasteners he designed are still solving the problem of coping with extreme stress and vibration, providing strength and facilitating lighter, stronger, more durable structures.

Today the product range based on his original drawing of a Lockbolt now known as the HuckBolt® has evolved to include small and large diameter fasteners, medium and heavy duty blind fasteners and associated installation tooling.

Solution Needed, Solution Provided

Make our engineers part of your team at the concept stage. Their unrivalled knowledge of advanced fastener function can make the impossible possible. A standard fastener in our range may provide your answer. If not, we can produce a cost-effective tailor-made solution.

The Huck Fastening System – Key Benefits:

- Will not loosen even under extreme vibration
- Maintenance free joints – no need to torque or re-torque
- Lower lifetime total cost of joint - high shear and tensile strengths for increased fatigue life of the joint
- High speed, easy to install systems can reduce production time by 75%
- Improves health and safety - replace welded joints
- Tamperproof – once installed cannot be removed without specialist tooling

Contact us

ARCONIC

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Email : info@afshuck.net
Web : www.afshuck.net

bsi. ISO 9001:2015 Quality Management

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